



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant

HARD, Robert A.

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PROCESS FOR RECOVERING METAL VALUES

Examiner

Unknown

Art Unit

Unknown

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS Washington, DC 20231

FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)

U.S. PATENT DOCUMENTS

Examiner <u>Initial</u>	Patent <u>Number</u>	<u>Date</u>	<u>Name</u>	Class/ <u>Subclass</u>	Filing <u>Date</u>	<u>Enclosed</u>
Am	2,767,047	Oct. 16, 1956	Wilhelm et al.	23-23	Oct. 20, 1953	Yes
<u> Im</u>	2,953,453	Sep. 20, 1960	Foos	75-121	Jun. 20, 1958	Yes
2 Mg	2,962,372	Nov. 29, 1960	Foos et al.	75-121	Jan. 17, 1958	Yes
SM	3,117,833	Jan. 14, 1964	Pierret	23-19	Sep. 25, 1958	Yes
JIM.	3,300,297	Jan. 24, 1967	Field	75-24	May 26, 1964	Yes
AMB	3,658,511	Apr. 25, 1972	Gustison	-G22B-51/00-	Dec. 22, 1969	Yes
AMB	3,712,939	Jan. 23, 1973	Capps et al.	C22B 50/00	Mar. 29, 1971	Yes
3113	3,972,710	Aug. 3, 1976	Meyer	C22B 34/24	Jul. 9, 1975	Yes
AMB.	4,164,417	Aug. 14, 1979	Gustison	·C22B 34/24; ·C22C 27/02	Apr. 28, 1978	Yes
	4,451,438	May 29, 1984	Floeter et al.	C01G 43/00; C01G 33/00; C01G 35/00; C01F 15/00	Sep. 29, 1982	Yes
A	4,718,996	Jan. 12, 1988	Vanderpool et al.	C22B 34/36; C22B 50/00 -	Sep. 4, 1986	Yes
ALYB.	4,808,384	Feb. 28, 1989	Vanderpool et al.	-C01G-41/00	Dec. 21, 1987	Yes
1 HB	5,023,059	Jun. 11, 1991	Bielecki et al.	*B01D-11/00	Nov. 2, 1988	Yes

Examiner Initial	Patent <u>Number</u>	<u>Date</u>	<u>Name</u>	Class/ <u>Subclass</u>	Filing <u>Date</u>	Enclosed
	5,084,253	Jan. 28, 1992	Pollock et al.	- C01O 33/00 ; - C22B 34/20	Nov. 13, 1989	Yes
JIB	5,437,848	Aug. 1, 1995	Hard	-C01G-56/00 ; - C01G-57/00	Jul. 10, 1992	Yes
Spr	5,492,680	Feb. 20, 1996	Odekirk	- C01F 17/00	Aug. 4, 1994	Yes

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document <u>Number</u>	<u>Date</u>	Country	Class/ <u>Subclass</u>	Translation <u>Yes</u> <u>No</u>	Enclosed
Apr	0 041 459	Jun. 1, 1981	European	-C22B 34/24; -C01G 33/00; - C01G 35/00	Abstract	Yes
App	2 438 623	Jan. 23, 1980	France	G01B 15/047	Abstract	Yes

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner			
<u>Initial</u>		<u>Document</u>	Enclosed
/ ne	1.	PCT Application No. WO 90/02823, published Mar. 22, 1990). Yes
73 16	2.	PCT Application No. WO 95/13985, published May 26, 1995	
2003	3.	PCT Int'l Appin. No. PCT/US97/04013 Search Report	. 163
		mailed July 16, 1997.	Yes
2 M	4.	PCT Application No. WO 94/01190, published Jan. 20, 1994	. Yes
243	5.	PCT Int'l Appln. No. PCT/US97/04089 Search Report	
		mailed August 12, 1997.	Yes
SYB	6.	PCT Int'l Appln. No. PCT/US97/04088 Search Report	
		mailed August 5, 1997.	Yes
SM	7.	"Extractive metallurgy of niobium, tantalum, and vanadium,"	Yes
		by C.K. Gupta, pages 405-444, 1984, no month,	
		by C.K. Gupta, pages 405-444, 1984, no month, International Metals Reviews, Vol. 29(6),	
EXAMINER			DATE CONSIDERE

DATE CONSIDERED

EXAMINER: Initial if digition considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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